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Dated: November 17, 2004 Signature: Eric M. Brusca
(Eric M. Brusca)

Docket No.: 27866/34132B
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Antony M. Carr

Application No.: 10/685,258

Filed: October 14, 2003

Art Unit: 1642

For: Cell-Cycle Checkpoint Genes

Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

Copies of the references on the PTO/SB/08 are not provided because they were previously provided in related application, U.S. Serial No. 09/029,047 or previously cited by the Examiner.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 13-2855, under Order No. 27866/34132B. A duplicate copy of this paper is enclosed.

Dated: November 17, 2004

Respectfully submitted,

By 

Eric M. Brusca

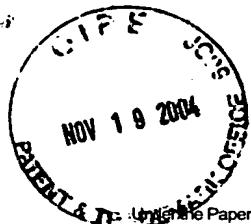
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PTO/SB/08a/b (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

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Substitute for form 1449A/B/PTO

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Application Number	10/685,258
Filing Date	October 14, 2003
First Named Inventor	Antony M. Carr
Art Unit	1642
Examiner Name	Not Yet Assigned

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U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
A1		5,912,143	12/1996	Bandman et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
B1		WO 89/03891				
B2		WO 90/13667				

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NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C1	Ahn et al., <i>Nature Genetics</i> 3 (4): 283-291, 1993	
	C2	Al-Khodairy, <i>et al.</i> , "DNA repair mutants defining G ₂ checkpoint pathways in <i>Schizosaccharomyces pombe</i> ," <i>EMBO J.</i> , 11:1343-1350 (1992)	
	C3	Al-Khodairy, <i>et al.</i> , "Identification and Characterization of New Elements Involved in Checkpoint and Feedback Controls in Fission Yeast," <i>Mol.Biol.Cell</i> , 5:147-160 (1994)	
	C4	Allen, <i>et al.</i> , "The SAD/RAD53 protein kinase control multiple checkpoints and DNA damage-induced transcription in yeast," <i>Genes Dev.</i> , 8:2401-2415 (1994)	
	C5	Barbet, <i>et al.</i> , "Versatile shuttle vectors and genomic libraries for use with <i>Schizosaccharomyces pombe</i> ," <i>Gene</i> , 114:59-66 (1992)	
	C6	Beamish, <i>et al.</i> , "Radiosensitivity in ataxia-telangiectasia: anomalies in radiation-induced cell cycle delay," <i>Int.J.Radiat.Biol.</i> , 65:175-184 (1994)	
	C7	Bowie et al. (<i>Science</i> , 1990, 257: 1306-1310)	
	C8	Burgess et al. (<i>J of Cell Bio.</i> 111: 2129-2138, 1990)	
	C9	Carr, <i>et al.</i> , "The cellular responses to DNA damage," <i>Trends in Cell Biol.</i> 5:32-40 (1995)	
	C10	Cawthon et al. <i>Genomics</i> 9 (3): 446-460, 1991.	

Examiner Signature	Date Considered
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Sheet	2	of	4	Attorney Docket Number	27866/34132B

C11	Chein, <i>et al.</i> , "The two-hybrid system: A method to identify and clone genes for proteins that interact with a protein of interest," <i>Proc.Nat'l.Acad.Sci.(USA)</i> 88 :9578-9582 (1991)
C12	Cimprich, "cDNA cloning and gene mapping of a candidate human cell cycle checkpoint gene," <i>Proc. Natl. Acad. Sci. U.S.A.</i> , vol. 93, pp. 2850-2855(1996)
C13	Deng, <i>et al.</i> , "Mice Lacking p21 ^{CIP1/WAF1} Undergo Normal Development, but Are Defective in G1 Checkpoint Control," <i>Cell</i> , 62 :675-684 (1995)
C14	Drwinga, <i>et al.</i> , "NIGMS Human/Rodent Somatic Cell Hybrid Mapping Panels 1 and 2," <i>Genomics</i> 16 :311-314 (1993)
C15	El-Deiry, <i>et al.</i> , "WAF1, a Potential Mediator of p53 Tumor Suppression," <i>Cell</i> , 75 :817-812 (1993)
C16	Enoch, <i>et al.</i> , "Fission yeast genes involved in coupling mitosis to completion of DNA replication," <i>Genes Dev.</i> , 6 :2035-1046 (1992)
C17	Geysen, <i>et al.</i> , "A Priori Delineation of a Peptide which Mimics a Discontinuous Antigenic Determinant," <i>Mol.Immunol.</i> 23 :709-715 (1986)
C18	Greenwell, <i>et al.</i> , "TEL1, a Gene Involved in Controlling Telomere Length in <i>S. cerevisiae</i> , Is Homologous to the Human Ataxia Telangiectasia Gene," <i>Cell</i> , 82 :823-829 (1995)
C19	Grimm, <i>et al.</i> , "Genetic engineering of <i>Schizosaccharomyces pombe</i> : A system for gene disruption and replacement using the <i>ura4</i> gene as a selectable marker," <i>Mol.Gen.Genet.</i> , 215 :81-86 (1988)
C20	Groudine et al. (T91040), GENESEQ Database, National Center for Biotechnology Information, National Library of Medicine, Bethesda, Maryland.
C21	Groudine et al. (X01275) GENESEQ Database, National Center for Biotechnology Information, National Library of Medicine, Bethesda, Maryland.
C22	Gutz, <i>et al.</i> , In Handbook of Genetics, King, R.C., Ed., Plenum Press, New York, Vol. 1 pp. 395-446 (1974)
C23	Hari, <i>et al.</i> , "The <i>mei-41</i> Gene of <i>D. melanogaster</i> Is a Structural and Functional Homolog of the Human Ataxia Telangiectasia Gene," <i>Cell</i> , 82 :815-821 (1995)
C24	Harris et al., J. of the Am Society of Nephrology 6 : 1125-1133, 1995.
C25	Harper, <i>et al.</i> , "The p21 Cdk-Interacting Protein Cip1 Is a Potent Inhibitor of G1 Cyclin-Dependent Kinases," <i>Cell</i> , 75 :805-816 (1993)
C26	Hartwell, <i>et al.</i> , "Cell Cycle Control and Cancer," <i>Science</i> , 266 :1821-1828 (1994)
C27	Hiles, <i>et al.</i> , "Phosphatidylinositol 3-Kinase: Structure and Expression of the 110 kd Catalytic Subunit," <i>Cell</i> , 70 :419-429 (1992)

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Sheet	3	of	4	Attorney Docket Number	27866/34132B

C28	Hillier et al. (R09128), Genbank Sequence Database, National Center for Biotechnology Information, National Library of Medicine, Bethesda, Maryland, publicly available April 5, 1995.
C29	Jimenez, et al., "The rad3 ⁺ gene of <i>Schizosaccharomyces pombe</i> is involved in multiple checkpoint functions and in DNA repair," <i>Proc.Nat'l.Acad.Sci.(USA)</i> 89:4952-4956 (1992)
C30	Kato, et al., "An essential gene, ESR1, is required for mitotic cell growth, DNA repair and meiotic recombination in <i>Saccharomyces cerevisiae</i> ," <i>Nucl.Acids.Res.</i> , 22:3104-3112 (1994)
C31	Lamb, et al., "Inhibition of DNA replication by ionizing radiation is mediated by a trans-acting factor," <i>Int.J.Radiat.Biol.</i> , 56:125-130 (1989)
C32	Lazar et al. (Molecular and Cellular Biology, 1998, 8: 1247-1252)
C33	Leach, et al., "Regional Localization of 188 Sequence Tagged Sites on a Somatic Cell Hybrid Mapping Panel for Human Chromosome 3," <i>Genomics</i> , 24:549-556 (1994)
C34	Maundrell, K., "nmt1 of Fission Yeast," <i>J.Biol.Chem.</i> , 265:10857-10864 (1990)
C35	Morrow, et al., "TEL1, an S. cerevisiae Homolog of the Human Gene Mutated in Ataxia Telangiectasia, Is Functionally Related to the Yeast Checkpoint Gene MEC1," <i>Cell</i> , 82:831-840 (1995)
C36	Murray, et al., "Cloning and characterization of the <i>S.pombe</i> rad15 gene, a homologue to the <i>S.cerevisiae</i> RAD3 and human ERCC2 genes," <i>Nucl.Acids Res.</i> , 20:2673-2678 (1992)
C37	Nasim, et al., "Genetic Control of Radiation Sensitivity in <i>Schizosaccharomyces Pombe</i> , <i>Genetics</i> , 79:573-582 (1975)
C38	Painter, et al., "Radiosensitivity in ataxia-telangiectasia: A new explanation," <i>Proc.Nat'l.Acad.Sci.(USA)</i> 77:7315-7317 (1980)
C39	Reiger et al. (Glossary of Genetics and Cytogenetics, Classical and Molecular, 4 th Ed., Springer-Verlay, Berlin, 1978)
C40	Rowley, et al., "Checkpoint controls in <i>Schizosaccharomyces pombe:rad1</i> ," <i>J.EMBO.</i> , 11:1335-1342 (1992)
C41	Savitsky, et al., "A single Ataxia Telangiectasia Gene with a Product Similar to P1-3 Kinase," <i>Science</i> , 268:1749-1753 (1995)
C42	Seaton, et al., "Isolation and characterization of the <i>Schizosaccharomyces pombe</i> rad3 gene, involved in the DNA damage and DNA synthesis checkpoints," <i>Gene</i> , 119:83-89 (1992)
C43	Schu, et al., "Phosphatidylinositol 3-Kinase Encoded by Yeast VPS34 Gene Essential for Protein Sorting," <i>Science</i> , 260:88-91 (1993)
C44	Sheldrick, et al., "Feedback Controls and G2 Checkpoints: Fission Yeast as a Model System," <i>BioEssays</i> , 15:755-782 (1993)

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C45	Sumitomo Chem. Co. (Q47789), Genbank Sequence Database, National Center for Biotechnology Information, National Library of Medicine, Bethesda, Maryland, publicly available March 2, 1994.
C46	Walworth, <i>et al.</i> , "Fission yeast <i>chk1</i> protein kinase links that <i>rad</i> checkpoint pathway to <i>cdc2</i> ," <i>Nature</i> , 363:368-371 (1993)
C47	Weinert, <i>et al.</i> , "Mitotic checkpoint genes in budding yeast and the dependence of mitosis on DNA replication and repair," <i>Genes Dev.</i> 8:652-665 (1994)
C48	Weinert, <i>et al.</i> , "The <i>RAD9</i> Gene Controls the Cell Cycle Response to DNA Damage in <i>Saccharomyces cerevisiae</i> , <i>Science</i> , 241:317-322 (1988)

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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